**Course Description Form** 

1. Course Name: General Physics 2. Course Code: **PHYS110** 3. Semester / Year: First semester/2023-2024 4. Description Preparation Date: 01/02/2024 5. Available Attendance Forms: In-person education + blended education 6. Number of Credit Hours (Total) / Number of Units (Total) (2 Hours theoretical + 3 Hours Lab.)/5 units 7. Course administrator's name (mention all, if more than one name) Dr. Mohammed Hussin Ahmed Al-Mola 8. Course Objectives **Course Objectives** Preparing successful graduates in the field of agricultural extension to work in production departments and other institutes and to contribute to the development plan of education. Enabling students to work efficiently as a team with other specializations. Developing the student's capabilities in research and development 9. Teaching and Learning Strategies Strategy In person lectures and the method of writing on the whiteboard Practical lectures in laboratories Scientific seminars and direct dialogue between the teacher and the students Methods of small educational groups

| Week | Hours         | Required Learning Outcomes   | Unit or subject name  | Learning  | Evaluation method   |
|------|---------------|--|---|---|---|
| 1    |               | a4, a1- Knowing the<br>states of matter and<br>comparing them.                             | States of matter:<br>hypotheses of kinetic<br>theory  | mounod  | mounou  |
| 2    |               | a2, a1- Identify the mechanical properties of static fluids1.                              | Mechanical properties of<br>static fluids include types<br>of fluids, density<br>properties, relative<br>density, pressure, and its<br>units. |   |   |
| 3    | 2 Theoretical | a2, a1, - Identify the<br>mechanical properties<br>of static fluids 2                      | Liquid pressure, gas<br>pressure, volumetric<br>elastic modulus of fluids,<br>discussion of previous<br>materials                             |   |   |
| 4    | + 3 Lab.      | b3, a1- Specialized mechanical properties  | The phenomenon of surface tension, the capillary property, the capillary property of soil, applications of surface tension,                   | A person-<br>lecture<br>using the<br>whiteboard | Attending,<br>quizzes,<br>Assignments,<br>class<br>participations |
| 5    |               | a1- Specialized mechanical properties  | The osmotic phenomenon, osmotic pressure.   |   |   |
| 6    |               | a3, a1, - Identify the<br>mechanical properties of<br>moving fluids                        | Mechanical properties of<br>moving fluids: types of<br>flow and critical speed  | 11%   |   |
| 7    |               | c1, b1, - Identify the important Bernoulli equation in moving fluids                       | Bernoulli's equation and its practical applications, with solving problems about applications of Bernoulli's equation                         |   |   |
| 8    |               | a2, a1, - Learn about the<br>Venturi scale.  | Venturi scale and Torricelli equation   |   |   |
| 9    |               | a1- Learn about the concept of viscosity and how to measure the viscosity of moving fluids | The concept of viscosity and how to measure it  |   |   |

في الكانن والالات الزراعية

| 10 | b3, a1- Learn about Bernoulli's equation and its mathematical applications | Solve problems with<br>Bernoulli's equation and<br>viscosity |  |
|----|--|--|--|
| 11 | c2, a1- Students are introduced to weather concepts specific               | Atmospheric physics  |  |
| 12 | a2, a1, the major and atmospheric physics                                  | layers of the Earth's atmosphere                             |  |
| 13 | a4, d3- Identify the<br>elements of the<br>atmosphere-1                    | How do pressure and<br>temperature change with<br>altitude   |  |
| 14 | a4, d3- Identify the<br>elements of the<br>atmosphere-2                    | How do pressure and<br>temperature change with<br>altitude   |  |
| 15 | d2, learn how to write<br>a report   | Review   |  |

## 11. Course Evaluation

The score out of 100 is Distributed according to the tasks assigned to the student such as Quizzes, Questions Sheets, Attending, Participation, Sem-Exam, Lab., and Final exam as follow:

|   | Evaluation method | Date of evaluation  | Mark | Percentage % |
|---|-------------------|---------------------|------|--------------|
| 1 | Quizzes:          | Weeks: 4-5-6-8-9-10 | 5    | 5%           |
| 2 | Questions Sheets: | Weeks: 3-5-8-11-13  | 10   | 10%          |
| 3 | Attending:        | All weeks           | 2.5  | 2.5%         |
| 4 | Participation:    | All weeks           | 2.5  | 2.5%         |
| 5 | Sem-Exam: Week 12 |                     | 10   | 10%          |
| 6 | Lab.:             | All weeks           | 10   | 10%          |
| 7 | Final exam:       |                     | 60   | 60%          |
|   | Sum               |                     | 100  | 100%         |



| Required textbooks. (curricular books, if any)                  | General Physics by Dr. Amjad Karjieh  General Physics by Dr. Amjad Karjieh + Assistant Lieutenant + Practical Physics Lieutenant  All physics sources that talk about the properties of matter |  |  |
|---|--|--|--|
| Main references (sources)                                       |  |  |  |
| Recommended books and references (scientific journals, reports) |  |  |  |
| Electronic References, Websites                                 | All solid electronic references related to fundamental physics   |  |  |



مدرس المادة

م. د. محمد حسين احمد المولى

رئيس قسم المكائن وآلات الزراعية

۱. م. نوفل عیسی محیمید